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A Creative Exploration of
Color and Design Through Serigraphy

by

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different planes in space.

Color is used specifically to heighten, or make clear, this illusion of depth. Color has three components: hue, value, and intensity. Hue is "...that essential element which leads us to name it green or red."¹ Value is the degree of lightness or darkness of the color.² And intensity is the strength of the hue.³ Warm hues comprise the side of the color wheel made up of yellow, orange, red, and red-violet. Cool colors are the rest of the hues: yellow-green, green, blue, and violet. No sharp line can be drawn between the two, however; for violet can be considered warm when compared to blue, but cool when compared to red. Complementary hues are pairs of hues opposite each other on the color wheel. Analogous hues are adjacent to one another.

Serigraphy is the making of color prints by the silk screen printing process. A sophisticated stencil

¹ Ralph M. Evans, An Introduction to Color, (New York, 1948), p. 118.

² Arthur Pope, The Language of Drawing and Painting, (Cambridge, 1949), p. 4.

³ Ibid.

technique, this process uses a screen of tightly stretched silk as the ground to which the stencil is fixed. This eliminates the need for ties between the shapes. Water soluble glue, photo emulsion film, lacquer film, and paper are several ways to block out the parts of the design that are not to be printed. This technique allows the printer to change the colors at will without changing the shapes. In this way different color relationships can be produced quickly. The paint used in this process is a mixture of pigment and transparent base. The greater the amount of base, the greater the transparency. The more transparent a color, the higher in value it is and the more it is influenced by colors under it. Even when the colors appear opaque, the color underneath changes the one on top to some extent.

In the following discussion each set of prints using the same shapes is designated with a Roman numeral. Within the sets each color combination is identified by an Arabic number. Some of the prints in Series IV have letters, also. These are to indicate that each print of that Arabic number uses the same colors but that the mottling effects are sufficiently uncontrollable that each print is considered unique.

No attempt is made to discuss each print exhaustively, but rather to point out the primary concerns of each one.

SERIES I

Looking first at the shapes themselves, the subtle changes in the interval between the edges of the shapes, together with their asymmetrical tilt cause tension. In #1 and #2 the rectangular format stabilizes this tension, destroying its effectiveness. Therefore, the enclosure is eliminated in the rest of the prints.

The hue contrasts in #1 are not great; and the value contrasts between the dark and the medium, and the medium and the light are equal. These factors tend to make the print predictable and do not utilize the variety of contrasts possible in this design.

In #2 the greater hue contrast of the center shape and its greater intensity cause it to move out in front of the other shapes. This shape can move forward or back in space, depending on its color. In #1, #2, and #6 it comes forward off the surface; but in #4 and #5 it moves back away from the surrounding shapes. The contrasts are such in #3 that it moves back and forth. The ambiguous division between it and its adjacent shape is caused by the subtle changes in hue and intensity.

The colors of the outermost shape and the second from the center shape are actually the same in #3, even

though the inner one looks lighter. The white paper makes the red appear darker by contrast; while the inner shape is surrounded by a darker color, thereby making it appear lighter. This is generally true of #4, #5, and #6, also.

In #4 the tension between the two darker colors is caused by subtle changes in hue and value. As a result they float on different planes. The two colors are reversed in #5. In #6 the same two colors appear different on the brown ground. The deeper value of the ground makes them appear lighter than in #4 and #5, and the red in the brown subtracts the red from the two colors, thereby shifting their hues away from red.

SERIES II

The design of this set presents new possibilities. The white of the paper acts as positive shape as well as ground. The colors relate to it directly as well as to each other. As a shape moves from touching the white to touching a printed color, something happens to its spatial orientation. The planes move back and forth as in Series I but bend and curve, also.

Consider the movement of the shapes in space in #1. The focus of interest is on the center cool-gray shape. At the top where it borders the gray, it appears closer to its adjacent shape than at the bottom where it borders on the white, so that it moves back in space at an angle. This is due to the change in value contrasts. The greater the contrast, the greater the illusion of space between the two shapes.

As the warm-gray shape on the right moves from touching the darker valued gray to the very high valued white, it comes forward in front of the adjacent shape; then it bends back to go behind the white shape. It, also, bends back at its outside corner, where it is again bordered by white.

Turning to the left side of the print, the gray

shape moves back in space as the white jumps forward. The white bends in the middle at its narrowest point, sending the top and bottom ends forward. The gray shape goes back in the center where it borders the white and less back at the top and bottom where it borders the other gray.

In print #4 the value contrast between the two grays is not strong enough to produce the spacial movement seen in #1. #8 has a hue change, but its equal values and intensities destroy the color space. In #7 the value of the lighter color is ⁵⁰~~60~~ close to the value of the white that the variety of possible spacial relationships is reduced.

The addition of hue contrast to the strong value contrast adds interest to #5. The darker shape is also less intense and cooler than the lighter shape. These factors help it to move back in space more convincingly.

The strength of #10 lies in its subtle hue change. However, the spacial interest is minimized by the lack of value and intensity contrasts.

In #12 and #14 the lighter colors are the same. The other color is darker and less intense in #12 than it is in #14. The greater contrast, thus created, makes

the lighter color appear more intense and higher in value than the same color in #14. Again, this strong contrast produces a greater feeling of depth than the lesser contrasts.

SERIES III

In this design the relationship of the two colors to each other will determine the spacial depth more than will their relationship to the white shapes.

The first two prints in this series create two different spacial effects. In #1 the printed shapes appear parallel, one in front of the other. These planes interlock with each other in #2. This is the result of removing the upper part of the left shape which overlaps the right. The right figure now cuts in front of the left at the top and then goes behind it at the bottom. The transparency of the paint places the planes close together at the bottom.

The colors of #4 are reversed in #6. The more intense green comes forward in both prints. This effect reinforces the spacial relationships set up by the shapes when the green appears on the right. However, it contradicts the spacial relationships in #6.

#28 adds a third shape to #4. This is the shape on the left repeated on top of the right figure. The original spacial scheme is not destroyed, while a new dimension is added; the yellow pops forward, leaving an octagonal hole going back to the green plane.

The yellow has a different effect on the green than it has on the violet. Green, its analogous hue, it makes more intense and closer to yellow; violet, its complement, it makes less intense. The shift of attention to this area renders part of the left side of the violet shape superfluous.

Compare the placement of the darker colors in #10 and #16. The left shape of #10 goes behind the other shape at the top better than does the same shape in #16. The yellow, due to its higher value, moves in front of the blue even though the shapes dictate the opposite. The color scheme of #10, on the other hand, emphasizes the spacial relationships already established.

The colors of #23 and #24 are the same, and their placements are identical. However, the order of printing is reversed, so that the green overlaps the red in #23, and the red overlaps the green in #24. The former clouds the spacial scheme, while the latter emphasizes it.

#3 and #15 illustrate the use of complementary hues and analogous hues. The extreme contrasts of complementary hues creates greater depth than closely related ones. The depth in #3 is helped, too, by

contrasts of value and intensity. Conversely, #15 is flat because its color contrasts of value, hue, and intensity are not great enough to sustain the illusion of depth in this print.

SERIES IV

This design emphasizes the white shapes more than the other three designs. How the printed shapes make the white areas move in space is the primary concern. Because the shapes are related only by their straight and jagged edges, they tend to break apart. Therefore, color has the task of unifying them at the same time that it produces spacial depth.

A comparison of #18 and #53 reveals that the unity must come from the use of closely related hues rather than widely divergent ones. The two sets of complementary hues used in #18 fragment the design; but the analogous hues in #53 unify the parts into a whole. The values of the blue-green shape and the dark blue shape in #53 are close enough to each other to bridge the white strip between them, so that the two halves of the design are held together. In #18 the sharp value contrast between the light blue and the dark brown shapes causes a separation rather than a union.

The use of the same color for two shapes, one on the left, the other on the right, also helps pull the sides of the print together in #53. #42 places the same colors side by side in the middle. Although this

arrangement helps unify, it isolates the other shapes and flattens out the center area. The confrontation of the same colors in #49 has similar effects on the other two shapes, but the spacial interest is saved by the play of the light color with the medium at the lower center.

In #50, where the shapes on the far left and the upper right are the same color, the spacial interest and the connecting power of the center region are minimized by a closely related contrasts between the light shape on the left and the darker shapes on the right. In #54, on the other hand, the dark confronts the medium at the bottom and the light at the top. The first pulls together, the second separates; so that there is a two-dimensional pull to the sides and a three-dimensional tension forward and back.

The movement in space of the white figures on the left and on the right varies from print to print. In #49 the dark and the light colors surround the white on the left. The strong value contrast between the white and the dark causes the white to pop forward along its left edge. Its weaker value contrast with the light gray causes the white to stay back in space,

closer to the printed shape. The colors are reversed in #51, so that the left side of the white area now moves back in space, as the right side comes forward. The value contrast between the same two shapes is less extreme in #53; therefore, the movement of the white area is not as pronounced.

The white area on the right in #40 does not have the same degree of interest. It is too large to sustain the influence that the light pink shape has on it. The reduction of its size in #53 restores the balance. It is now possible to see the outward thrust of the white along its lower edge as related to its less emphatic movement along its other edges. The spout-like shape moves back and forth much the same way that the white shape on the left does. The larger white area that moves up into the center of the light blue-green shape appears to fade back into space, away from the dark blue at the bottom. With the darker color on top, the spacial relationships are reversed in #55. The spout comes out at the top and goes back at the bottom. The upper portion of the central white area comes forward as the lower end fades back into space. This shape also curves toward the horizontal

white area on the left, thus, acting as another strong connection between the two halves of the print.

The overlap of the two shapes on the right, although not directly influential on the white area, demands attention. In #53 the darker shape appears on top of the lighter shape along its top edge, at the same time that it punches a whole in it. The lighter color moves in front of the darker one along its inner edge. The same is true of #54, except that the darker color has less of a tendency to break the plane of the lighter one. #55 reverses the colors of #54. Here, the darker color wants to move in front of the lighter one, as the lighter color fights to stay on top. The greater transparency of this color, which causes it to blend with the under color, may account for this phenomenon.

Several experiments with mottling of colors in the printing process and with textures affirm the artist's feeling that unless they are conceived of as a part of the original design, they are doomed to appear as added effects for their own sakes with no organic relationship to the design as a whole. The textures of #18, #40, and #42 lack this organic relationship. The texture of

the lower right shape of #40 is less out of place than the others. Since the mottling in #29b destroys the purity of colors of each shape, the shapes break up into many parts whose spacial relationships are unclear. # Thus, the shapes are no longer strong enough to influence the white areas. Although less extreme, the same is true of #5b. The right side is particularly affected. The color of one shape blends with the other to the extent that their spacial relationship is unclear.

CONCLUSION

In each of the four design discussed in this study different kinds of shape relationships are present. The designs of Series I and Series III emphasize the relationship of one printed shape to another. Series II emphasizes their relationships to the white areas they define. The extreme case is Series IV, where the colored shapes do not touch each other except in a small area in the lower right corner. The printed shapes are seen more as how they effect the white areas than what they themselves do in space.

Each of these shape relationships makes specific demands on color. All three elements of color function in each design; however, usually one or two of them is more important to the demands of the design than are the others. Series I requires subtle, but clear, changes in hue and intensity for the movement of its planes in space. Great value contrasts are primary to the illusion of depth in Series II and Series IV; While in Series III value and intensity play the major roles.

PURPOSE

The primary purpose of this study is the exploration of color relationships in original serigraphs with an emphasis on the illusions of depth that they produce.

OBJECTIVE

This study limits color to its ability to create illusions of space, design to its formal aspects, and the medium to silk screen printing. The objective is to use this technique to gain an understanding ^{of} ~~to~~ the demands design makes on color and of how color influences the relationship of one shape to another.

DEFINITION OF TERMS

In this study design is limited to hard edged shapes which are organized into a whole, where each shape serves two purposes. On one viewing a shape works as a figure which rests on a ground; then it becomes the ground on which other figures rest. In this way no part of the design is superfluous. Each part is integral to the whole. An emphasis is placed on the illusion of depth, also; so that the shapes do not appear to rest on a flat surface, but exist on

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ABSTRACT

A Creative Exploration of Color and Design Through Serigraphy

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Anne Louise Jones

The primary purpose of this study is the exploration of color relationships in original serigraphs with an emphasis on the illusions of depth that they produce. This study limits color to its ability to create illusions of space, design to its formal aspects, and the medium to silk screen printing. The demands design makes on color and how color influences the spacial relationships of one shape to another are discussed in four sets of serigraphs.

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